

How can Central banks cope with the Changing structure of the Financial Industry?

We're going through a world with a lot of transformation of our financial structure. The question mark that that raises is how do we as central bankers deal with that. So what I'd like to do is to describe what I'm going to talk about with you and the four parts of the talk. The first thing I want to do is talk about what are the fundamental forces that are driving financial structure. In particular, the reason why I want to talk about that is because it will help us understand how the financial structure is changing in the United States but also in Europe and the rest of the world.

Then that leads to the issue of what kind of problems does that cause us as central bankers to face. I say us as central bankers, I'm not quite officially a central banker because I only consult with the Federal Reserve Bank in New York, but once you get that membership card it's hard to give it up. Finally what I want to talk about is, given these challenges, what are some of the things that central banks can do to make sure that the policy works in the right direction.

1. Fundamental Forces driving Financial Structure

So, let's talk about the fundamental forces driving financial structure. There are really three basic forces that I want to talk about. First of all are changes in transaction costs. Second, are changes in the amount of information in financial markets. Third are changes in the regulatory political environment. All three are very important in terms of how our financial structure works and how it changes over time. So clearly when you think about financial structure, you realize that the transaction costs are an important impediment to financial systems working well and so in fact financial institutions develop to get around these transaction costs. And particularly in terms of changes, one of the key things which has changed transaction costs very dramatically, is the advent of information technology. In fact when computers first came into existence, the initial big uses besides government were in financial institutions. And that's for good reasons: one is because transaction costs are such an important part of what financial institutions have to deal with and also as we will see, they are also important in terms of solving information problems. So what's been going on here: information technology has been dramatically lowering transactions costs and what that means is that the financial industry can now provide new services that used to be too expensive to provide. We're getting new products and financial services developing. We will see what implications that has in a little bit.

The second major part of the financial structure that in fact is very important in terms of explaining how the financial structure works is the problem of asymmetric information. The major impediment to financial systems working well — and by financial systems working well, what we mean is that it takes funds from people with excess savings and then it gets those funds to people with productive investment opportunities. If that's done well, then you have economic growth and of course the economy does much better. But there are three major impediments to that in terms of asymmetric information, one is of course the adverse selection problem, which is that the people who are most attracted to you are the ones that most want to get your money. So clearly the way you deal with this is to have screening to screen out good from bad credit risks. Secondly is that once you've actually made a financial contract with somebody, there is the problem of moral hazard, the fact that their incentives are not the same as the person's who has given the money. So they are more likely to want to take risks at your expense once you've given the money. So how we deal with that is through monitoring. We actually check to see what in fact they're doing, and if they're doing things we don't like, we try to stop them from doing it. When you look at asymmetric information problems of adverse selection and moral hazard, we realize that because of the free-rider problem, it's a severe impediment to the effect of functioning of securities markets. Because the problem with securities markets is that securities are homogenous. So one share of stock is the same as another share of stock and that means that people can free-ride off information collection done by other parties. Suppose someone else is willing to monitor a firm to make sure that they are not violating restrictive covenants, not taking on too much risk. I'm perfectly happy to let them do the work for me and so I'm not likely to do anything at all. Once everybody thinks that way, you don't get monitoring. So the key issue here is that because of these information problems you're going to see that it's very hard to get securities markets work well. Particularly in an environment where information is not that high quality.

Well how does information technology change that? By in fact having very good telecommunications and also having good spreadsheets and computers that are so cheap that the one that sits on my desk now is ten thousand times more powerful than the one I learned on, many many years ago. As a result of these advances in information technology what you find is that now information quality is better, there is less asymmetric information. And what that means is that more firms can issue securities than they could before. So this is a good thing for the financial system, it means that you're going to use more market securities, we'll see that this had very major impacts on financial structure. And of course what it may mean too on the other hand is that financial intermediation may be less important, because financial intermediaries are designed to get around the free-rider problem by making private loans. So one of the things that we're going to see in terms of the way the financial system has changed, is that the traditional business of financial intermediation has gone into some decline.

The last issue is that there can be changes in regulatory environment and also what I call the political environment. So I'm not sure what to call the adoption of the Euro, whether it's political, regulatory... but clearly it does change the picture for Europe. And clearly there's been a reduction in the barriers to geographical diversification. And in the context of the US we finally have nation-wide banking¹. We now allow banks to branch nation-wide and in fact we're seeing banking networks which cover all fifty states in the United States. And also, my view is that the adoption of the Euro is going to do the same thing in Europe.

¹ Cf. Riegle-Neal, Interstate Banking and Branching Efficiency Act of 1994

And in fact I think that one of the key reasons why people have pushed the Euro and the European Monetary Union is in fact to get this broader geographical diversification not just in the banking industry and financial services industries but in other industries as well.

Furthermore, we're also seeing the elimination of competitive barriers, so in the context of the United States, one of the key competitive barriers was the so called Glass-Steagel act which did not allow banks to engage in the securities markets business or securities market companies engage in the banking business, and indeed this has also changed² — I should mention that some of these changes are very much due to things like changes in technology which have made it harder and harder to keep this separation in place — and again the adoption of the Euro I think is going to increase competition in Europe in terms of the financial services industries. And that's something that we shall see increasingly over time.

2. Impact on financial structure

So what is this doing to the financial structure? Well the first point is that information is getting better, which means that in fact more firms can now issue securities instead of going to financial intermediaries which means there is going to be a very substantial growth in debt markets. And we've seen that in two ways — and when I say debt market I mean debt market involving securities — so one way is a direct rise of debt markets which have been around before but now have been expanded. Corporate bonds have always been a fact of life, but what we've seen is that short-term corporate bonds (that's the commercial paper market) have expanded tremendously relative to other kinds of lending, and again that's a natural manifestation of the fact that information quality has improved. And indeed the other thing that we'd expect from information quality improving is that lower quality firms now can issue securities. And in fact we've seen this very much in terms of the rise in junk bond market, where firms that previously we would consider not to be investment grade and therefore not able to issue securities now are able to go into the capital markets and issue securities. Of course what's important here is it means they can get money by issuing bonds rather than by going to commercial banks.

The second thing that we've also seen happening in recent years has been the tremendous rise of derivative markets. And this has actually been due to demand factors like increased interest rates volatility which has increased the demand for hedging. But it also has to do with technology and sometimes smart academics. So for example the field of financial engineering which really started with options pricing is something that actually helped lead to the creation of large scale derivative markets.

We've also seen tremendous changes in payments technology. So, I can't remember the last time I've seen a teller bank. Instead the way I get money from the bank is by going to an ATM. In fact one of the things that is well-known now, if you go to Europe you don't ever want to deal with the travalex guy, the guys that are going to charge you five to ten percent for changing your money. Instead you find the first ATM machine that you can and it's in fact connected to my bank in New York. And so I got two thousands francs out of the ATM machine when I got into Paris yesterday morning. But clearly also there's the fact that you also don't need to go and to actually see human beings anymore, because most banking transactions now can be done via a computer. So I go online, do a couple of clicks and do my

² Gramm-Leach-Bliley, Financial Modernization Act of 1999

transactions that way. So what we're seeing is a tremendous change in the way liquidity services are being delivered by banking and other financial institutions and a major change in payments technology.

We're also seeing, as a result of some of the other changes, the decline of what I call traditional banking. So when I started studying economics and we talked about what banks did, we said banks are financial intermediaries that borrow short and lend long. That was the standard description of banking activities. And in fact banks do still do that, they still do borrow short and lend long. But the key point is that they are doing less and less of that, relative to other activities. And in fact the reason why traditional banking has been in decline is because there is increased competition. Banks find that many of their best customers now don't really need to borrow from them instead they can go to securities markets: they can issue commercial paper or they can issue long term bonds and in fact even if they are not super high quality can issue long term junk bonds. So what this has meant is that banks actually have shrunk substantially in terms of their activities both relative to securities markets and also to other financial intermediaries many of which are engaged in securities markets' transactions. So we've seen an almost halving of the market share for example of US banks relative to these other institutions. And generally that's occurring again world-wide. One of the important issues that comes up is when you're in an industry where part of your business is in decline, what do you do about it? There are two routes to go. One route is to actually seek out profitable businesses that are not too risky, and that's the good route. The other route is to go out and seek out business which is pretty risky in order to keep your profitability up. But in fact banks have done both things, and financial institutions have done both things. They clearly have had a decline of the traditional business and have gotten into riskier lending. Examples are real estate lending which has become a much bigger part of bank portfolios and of course has got many banks into trouble. They have also other risky lending such as lending to third world countries and lending for to assist take-overs or mergers. And of course what is also happening is that banks have moved onto other activities, particularly off balance sheet activities where they generate fee income. So for example if you look at the amount of income that's coming into US banks from fee income in the last 20 years it has doubled from a share about 15 percent to a share of close to 40. So there is a major change in terms of what banks are doing and that's going to present some particular challenges.

The last issue here in terms of impact is financial consolidation. And if anything this has actually been accelerating in recent years. If you look at the report the G10 produced on financial consolidation you'll see that in fact mergers and acquisitions actually accelerated; that in the 1990s most of them occurred in the last couple years of the 1990s. So here what's going on: information technology is in fact able to increase economies of scale because the ability to collect information and put it all in one place and then do things with it has increased very tremendously. And also we've seen that this deregulation has very much expanded the activities of banks. So there is a whole bunch of consequences in terms of financial consolidation. One is that the number of banking institutions has been dropping quite sharply. In the US we've seen a tremendous drop in the recent years but actually this has been happening in Europe as well and also in Japan. And so one implication of that is that we've actually got a greater concentration of banking, the top five banks now control bigger market share than they did previously. The third item is related to that, which is not only that we've got larger organizations developing but because of this expansion of activities

and the breakdown of these restrictions on things like getting involved in the securities business as well as the banking business, that we've had the development of what the Federal Reserve call them LCBOs — large complex banking organisations. I don't know if it's a great name, but it sort of gets you the idea that we're forming very huge financial organizations that are engaged in many, many financial activities and also they are very complex in terms of what they are doing. And those three things actually present quite a few challenges to central banks in terms of safety and soundness issues. The last consequence is that these breakdowns of restrictions on geographical diversification and also product diversification means that bank are actually becoming better diversified. And also this is an improvement in efficiency, so this is the good news. And in a sense it is one that's not a challenge, it makes life a little bit easier for central bankers.

3. Challenges to central banks

So lets actually talk about some of the challenges of central banks. And I'm going to classify these in terms of the easy ones that I don't think are a big problem and the ones that I think are really very serious ones that we have to be very worried about in the future. So let me first of all talk about the first challenge which is that we have a change in terms of financial structure that is going to have effects on the transmission mechanism and that might make monetary policy harder to do. The reason why I don't think this is a big problem is because I think that this has always been a problem. That transmission mechanisms have always been changing and it has been a fact of life for central bankers for a very long time. So it's not really that there is a new problem. It is one of the reasons why I think being a central banker is interesting and why that there's always going to be the so called art of central banking, that you actually need to have smart people in the jobs of being governors of central banks and also they need good research departments — something that I always like to mention any chance I get.

The other thing that I also should mention is something that is not always as well-known outside the central banking world, a sort of the dirty little secret of central banking, which is central bankers know a lot less than the public thinks. Now you as academics already know that, but clearly the way the press talks about the United States is as if Alan Greenspan is the only person who can find Oussama Bin Laden. But it is really amazing how limited our knowledge is, that when you actually sit down and start thinking about forecasting and start thinking about what you are doing when you set policy instruments to manipulate the economy: a lot of times you are making just very good guesses. What I think is remarkable however is that what we have found is that if you just get the basics right, you do very well, and the basics being right means that central banks pursue price stability as their main goal. And number two is that if central banks are transparent about the way they are doing that, it turns out that the markets do a lot of the work for central bankers — that we find things become much more stable in an environment where we are pursuing price stability in a very transparent way. And in fact there has been tremendous strides in this direction both in countries which are considered inflation targeters, where inflation targeting involves announcing a numerical inflation goal, instituting price stability as an institutional goal and then making it very transparent as to how you get there. Yet even countries that don't admit to being inflation targeters have elements of this and in some cases can do just as well. So for example in the United States we don't have an inflation target, we don't have a

nominal anchor in the literal sense but we have a great nominal anchor — it's Alan Greenspan. So in fact clearly the Federal Reserve — Alan Greenspan — has been very clear in exactly what it is doing, and it's very much helped monetary policy. And what we find is that central banks have been able to get much better control on inflation than any of us could have possibly imagined. And yet I can tell you that inside the central bank we are still not sure about how the transmission mechanism actually works.

The second issue that again I think is minor is that you can get a shrinkage of demand for reserves and for currency. And in fact people talk about going to a cashless economy, one where in fact there is no demand for reserves. I happen to think that we're very far away from that. But I think the key point to make is even if there is a shrinkage of demand for reserves it doesn't necessarily make monetary policy harder to do. What it does do is that it makes it harder to control the money supply. But my view of this is "so what" if the money supply is not important in terms of actually doing monetary policy? What we find is, that under normal conditions, unless you do very bad things to your economy, and that's the case of Japan, that the main tool for monetary policy-makers is the short-term interest rate, the interbank interest rate, and that can be controlled very closely regardless of the demand for reserves and currency. And in particular, we've seen this development in countries such as Canada, New Zealand and Australia, which don't have any reserve requirements, when they use the so called corridor approach — of having lending facilities and deposit facility which keep a very narrow band on the interbank interest rate. So again this I don't see as a big problem.

But where is the real big problem for central banks going forward? This is the problem that financial institutions may take on greater risk. And in particular, the potential for risk-taking by banks and by other financial intermediaries, has very much increased in recent years. Why? Well clearly, the derivative markets are a good thing, because they allow us to spread risk and to do hedging. But they can also allow people to take big risks when they shouldn't be doing. They could be used not only for hedge and reduce risks, but to speculate and increase risk. The second issue is that when you have an industry whose basic business is in decline, then there is tendency to think about going into activities with high risk in order to keep profits up. In fact this is a very serious problem in the Japanese context, and it is one of the reasons they got into a lot of trouble. And that can be done either through risky lending or by going into off-balance-sheet activities that are also very risky. The other difficulty is that the too big-to-fail problem is getting worse. And of course the reason it is getting worse is because of financial consolidation which is probably a good thing from an efficiency view point but in fact means that we're getting these large complex financial organizations. And if they are large enough, and they go belly-up that automatically means that there is a systemic risk problem. And that means that you are much more worried about letting them go down the tubes and again, if we are worried about letting them go down the tubes then people expect there is no risk in terms of this institution because it will always be bailed out. Therefore people are not going to monitor them very closely. And that means the institution is likely to take on more risks. In fact one of the nice piece of evidence on this was occurred in the United States. We had a too-big-to-fail policy in place after Continental Illinois went broke in 1984, and it turned out that when you look at the banking institutions that were taking the most risks, it turned out to be the largest banks in the United States. They had the lowest capital ratios and in fact they were the ones that were getting involved in lending to the third world and in terms of lending to promote mergers.

There is some good news for the challenges to central banks from having more diversification both in products and also across geography. And in fact in the European context, the adoption of the Euro in the monetary Union I think is going to create much more transnational but European financial institutions. And of course the benefits of that are that if you have one region of Europe that gets into trouble and another region is doing well, the financial institution is less likely to fail.

4. How central banks can cope

So now, here we come up with the question: if there is a problem what do central banks do about it? One view is to try to restrict the activities of financial institutions. Of course the problem with this is that it would hurt efficiency. And also the government is usually not very good in choosing which activities to get into and not get into. And so clearly the most important thing that central banks can do is to engage in more vigilant supervision. And I want to talk about several forms that this might take and even make a few controversial comments about Basel II, to get some reaction from people here. Clearly supervision has to be particularly careful and particularly vigilant when it comes to these large complex banking organizations. Because they present the greatest challenge, both in terms of systemic risks and in terms of activities which are very complex and may be opaque as a result. So one other thing that we need to do is to keep capital standards beefed up. In fact this has happened under Basel I whose key purpose was to increase capital in banks throughout the world, and it was very successful in that regard. Indeed the FDICIA act in the US in 1991, which followed after Basel I also did that by in fact raising capital standards, putting into place prompt corrective action in which if a bank's capital falls below levels which it should be meeting, then you can do immediately things to the banks to get them to behave better and to get the capital back up. It also increased supervision and actually made supervisors far more accountable.

Let me make some comments about Basel 2. I worry that people have taken the wrong lesson from Basel 1. I think Basel 1 should be considered a great success, but the reason I think it was a great success is that it increased capital in banking institutions. It was not a great success because of the risk-based capital part of its implementation. So what people have done, is that they've said, look Basel 1 was a success because it put in these risk-based standards. On the other hand, because these standards were not finely tuned enough there was all this regulatory arbitrage: Because you had these very rough classifications so that one corporate loan is like any other corporate loan, then basically we would find that banks might move towards loans that are more risky in order to keep their amount of capital on hand less. Basel 2 is trying to fix this up. But we've gone from a document that was twenty five or so pages in Basel 1 to one that is over 600 right now. Basel 2 was supposed to be implemented shortly but it was so complicated and has received so much criticism that now Basel 2 has been delayed. The problem that I am worrying about in terms of the new Basel standards is that the pursuit of the perfect may be the enemy of the good. That trying to get a perfect system of risk-based capital standards may actually be close to impossible. And so what I am going to talk about is a potential solution to think about focusing much more on risks, which actually is a very strong element of Basel 2, and maybe that is really the way Basel 2 needs to go rather than trying to refine the buckets.

So the other problem I should mention is that capital is not going to be a solution to the problem of too much risk taking. One of the problems of the change of the financial structure is we've created all these new financial instruments that allow you to eat up capital almost instantaneously. And of course the classic example is the case of Barings, where one rogue trader not in the main centres of Europe, actually brought down one of the banks in Europe, by making huge bets, and in a very short period of time, eroded a well-capitalized bank and caused it to fail. So the issue is that focusing too much on capital standards is a mistake and trying to get capital standards that are sufficiently complicated that they will meet all contingencies again, may be beyond the capabilities of many supervisors or any regulations.

So what have central banks started to do, they moved to thinking more about risk management procedures rather than capital standards. And I think that actually is the right way to go. What this may mean for example in terms of capital standards is that what you really care about is that there is some minimal level of capital. So you might for example have some leverage ratio that you decide is necessary for any bank because less than a certain amount of capital, lets say 5 or 6 percent of assets, means that that banks shouldn't be in business no matter what it is doing. But then in terms of thinking about how much more capital it should have, the question you want to ask is does the bank have appropriate procedures in place for actually calculating the amount of capital it needs given the risk it is taking. And that is much more what we call a supervisory approach rather than a regulatory approach.

The second solution is that you can use market discipline and in particular, focus on increased disclosure, and again this is part of the new Basel standards. And also pushing the idea that banks should have subordinated debt, i.e., debt that is junior to any other debt. And clearly a very important part of this is to make it very clear that the government will not bail out that subordinated debt, because in that case it won't be effective in reducing risk taking by banking supervision.

What about the too-big-to-fail problem ? This is a real tough one. So we see that particularly with large complex banking organisations which are going to become more and more common, that if one of them fails, it automatically means that you are going to have a systemic problem. Maybe not always, but most of the time you will have a systemic problem. So what do we do about it ? Well I think the answer is the other things I've talked about: vigilant supervision, using the market more, disclosure, and subordinated debt. In fact this is exactly one of the ways that the Federal Reserve Board has been doing in terms of talking about the ways large complex banking organisations should be handled, that they want them to have subordinated debt, they want more market disclosure, and they really want to check them out pretty closely. But here is the big problem: even if you do that there is always the issue that if you are very big that it is going to be very hard for the government to let you fail. So the issue I think about is Citigroup. If Citigroup gets into trouble how easy is it going to be to allow it to fail. And by saying allowing to fail, really what we are saying is allowing creditors to that institution to loose money. And so here is an issue that I think we might want to think about, it is a proposal that I have put out before. It's an in-between solution to the problem. The way I like to describe it is "nail the first S.O.B. and then circle the wagons around the rest". OK, so if you watch westerns, you know about circling the wagons. And the idea here is that typically a failure of one major institution, if that was the end of it, would not bring down the financial system.

But on the other hand, if you think of just letting the first guy go, and then standing back and saying lets see what happens afterwards, that is going to be very naive. The reality is that a safety net is going to have to be put into place when the financial system gets hit with a major shock and the failure of a large financial institution is going to be such a major shock. So here the idea is that what you do is that you have a presumption that the first guy that gets in trouble is going actually to incur losses on the creditors. On the other hand, once you do that you've got to say, look, that's going to be a big shock to the system, I know that I'm going to have to circle the wagons around the rest of the financial institutions, the rest of the large complex banking organizations, and that's the reality of what I'm going to have to do. And of course the disadvantage of this is that still you are creating some moral hazard. The key point however is that if a lot of bad banking is idiosyncratic, is within one bank, the bank is always going to worry that it is going to be the first. And if I'm going to be the first I'm going to be in trouble and then people who lent to that bank are going to say, do I want to lend to the first bank that goes under. So in fact it may minimize a lot of the moral hazard problem. The moral hazard problem still will exist which is why this in and of itself is not going to solve the problem. And this is why the issue of vigilant supervision, and using the market along lines I mentioned before, I think are very, very important.

So why don't I stop there. I'm sure they will be comments and thoughts about these issues because clearly they are very much in the minds of not just bankers but people in all sectors of the economy. Thank you very much.

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